

**Listing of Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-12 (canceled).

Claim 13 (previously presented). An optical disk comprising:

a data layer;

a mask layer overlying the data layer and comprising a nonlinear optical material and nanoparticles embedded in the nonlinear optical material, wherein the mask layer provides an effective aperture upon a gate beam having a power ranging from about five milliwatts to about 10 milliwatts being directed at the optical disk, and wherein the nanoparticles are configured for increasing a local field intensity; and

a substrate situated on at least one outer surface of the optical disk.

Claim 14 (original). The optical disk of claim 13 further comprising a spacer layer between the data and mask layers.

Claim 15 (original). The optical disk of claim 14 wherein the spacer layer comprises ZnS-SiO<sub>2</sub>.

Claim 16 (original). The optical disk of claim 14 wherein the spacer layer comprises SiN.

Claim 17 (canceled).

Claim 18 (original). The optical disk of claim 13 wherein the data layer comprises Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>.

Claim 19 (original). The optical disk of claim 13 wherein the data layer comprises a dye doped organic material.

Claim 20 (original). The optical disk of claim 13 wherein at least part of the nonlinear material comprises a material selected from the group consisting of phase change materials, photo-refractive materials, photo-chromatic materials, and combinations thereof.

Claim 21 (original). The optical disk of claim 20 wherein the nonlinear material comprises antimony.

Claim 22 (original). The optical disk of claim 20 wherein the nonlinear material comprises an organic material.

Claim 23 (original). The optical disk of claim 13 wherein the nanoparticles comprise metallic nanoparticles.

Claim 24 (original). The optical disk of claim 23 wherein the metallic nanoparticles comprise silver.

Claim 25 (original). The optical disk of claim 23 wherein the metallic nanoparticles comprise gold.

Claim 26 (original). The optical disk of claim 23 wherein the nanoparticles comprise rods or shell structures.

Claim 27 (original). The optical disk of claim 26 wherein the nanoparticles comprise rods having widths of about 20 nanometers and lengths of about 50 nanometers.

Claim 28 (original). The optical disk of claim 26 wherein the nanoparticles comprise vertically aligned nanoparticles.

Claim 29 (original). The optical disk of claim 23 wherein nanoparticles comprise coated nanoparticles.

Claim 30 (original). The optical disk of claim 29 wherein a coating of the coated nanoparticles comprises oligonucleotides functionalized on the 5' or 3' end with alkylthiol.

Claims 31-34 (canceled).